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By M. MAC LEAN.

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AGRICULTURAL.

ON GATHERING ASPARAGUS.—In all the books of gardening which I have seen the direction for gathering asparagus has always been cut it several inches below the surface of the ground, as soon as the stalk has advanced a few inches above it. The asparagus generally brought to market is cut in this way, the upper half being green and tender when cooked, the lower half white, tough and uneatable. The experience of many years has taught me that it is far better to let the asparagus grow to the height of ten inches, or a foot, and then to gather it by breaking with the fingers, as low down as it is tender and breaks easily, which, when the weather has been warm, is generally from six to ten inches. Asparagus, thus gathered, will be found to be much finer, the whole being tender and eatable, the produce much greater, and the process attended with no disadvantage whatever. Asparagus even two feet high, will be found fit to gather in this manner, if at any time it has outgrown the consumption, or escaped attention, which indeed was the occasion on which this new method of gathering occurred to me. I have since always practised it. Let those who are fond of asparagus give it but one trial, and they will never again resort to the old system.

Magazine of Horticulture.

HORTICULTURAL ASPARAGUS.—The American aphid or bug, of late years has proved very destructive to wall fruit, and particularly to our finest winter apple, the Ribston pippin. Mr. M. Hardy, gardener of Jno. Graat, Esq., of Kilgraston, having observed during the progress of this insect over the garden under his charge, the jargonelle pear uniformly escaped the infection, it occurred to him that by engrafting the Ribston upon the jargonelle stock, the influence by which the latter seemed to resist the attack of the aphid might be imparted to the apple. This he accordingly tried three or four years ago, and the result has not only answered Mr. M. Hardy's expectations in regard to the health of the wood, but in the improvement of the fruit, both as to the size and flavor. Specimens of the wood and fruit from the infected tree, and from the engrafted one, are at present to be seen at Messrs. Dickson and Turnbull's here, and the remarkable contrast which they present affords the most convincing evidence of the beneficial effect of the system which the experience or three successive seasons has confirmed.—*Perth Courier.*

ON THE PART OF RHUBARB.

Jussieu in his classification, has placed this plant in the VI class, *Dicotyledons*, 52d Order *Polygonaceae*, or the *Dock Tribe*; Herbaceous. In the classification of Linnaeus this Order of Plants is placed in the 9th Class; *Enneandria Trigyna*. It only includes four families. The Laurel, the Cashew, the Rhubarb and Flowering Rush. Of the third Order, there are nine species or more; the only ones which are cultivated in the kitchen garden are the Rheum Rhabonticum, introduced from Asia to Great Britain in 1578.—The *Siberia* until 1758 and the Rheum Hybridum, from Asia in 1778.

These three species are raised in this country for the sake of their succulent acid petioles, as a substitute for sour apples, gooseberries, &c. or an addition to them; the two latter species seem not to have been ever imported into the United States, or if they have, not been extensively known at the South.

The Rhabontic and the Undulate have leaves from eighteen to twenty-four inches long, and from twelve to eighteen wide, according to the soil and season; they are cordovate, rather obtuse, blunt, smooth, with reddish veins; their flowering stalks will grow to the height of three or four feet.—There are many distinctive marks in the leaves of these two species, not necessary to be here mentioned. Probably Vilmot's early scarlet Rhubarb is a variety of the Rhabontic, and there may exist many other varieties.

The Hybrid species has very large leaves; when under good cultivation, they will often measure four or even five feet in length, and of a proportionate width; they are somewhat coriaceous, smooth and of a light green or glaucous color.

These three species are cultivated for the stems or the lower leaves, which come to maturity earlier in the spring than the gooseberry and other fruits for which it is a substitute; the Hybrid affords the

most abundant and succulent supply for these purposes. Rheum derives its name from the ancient name of the River, which watered its native region; the *Rha*, now named the *Volga*, emptying itself into the Northern shore of the Caspian Sea.

All the species of this plant may be propagated from the seeds or from the roots; if from the seed, which is the best mode, in February or March, sow the seeds about six inches apart in a light deep and rich soil; well pulverized, for depth and richness of soil are indispensable requisites for good healthy plants.

In the autumn of the same year, if you have taken good care to water and to shelter them from the scorching suns of the summer, the plants will be fit to transplant into their beds; young plants require careful watering, even when it would be injurious to older roots; and we have seen them protected from the sun by driving down on the south side of each plant, a board about twelve inches wide, and slanting so as to break the sun's rays in the middle of the day and yet let the air and light have free action upon the plant. In this way you can in all October have them put out so as to produce leaves for the next spring.

When the roots are divided for transplanting, you must retain a bud on the crown of each section. Before transplanting either these sections or the young plants from seed, select a light soil, rather inclined to sandy, have it highly manured and spaded up to the depth of three spits of twenty-one inches, and thoroughly pulverized.—then set out the Rhabontic or the Undulate in rows at the distance of three feet by two—but the Hybrid at five feet by four.

They will now only require to be kept free from weeds and to have the ground occasionally stirred up with a three tined fork or a rake, adding every spring a good dressing of well rotted manure, stirred into the earth as deeply as possible, and your bed will continue good for many years.

The advantages of having the petioles or leaf stalks blanched for all culinary purposes, are two-fold, i. e. the desirable qualities of improved appearance and of flavor, as well as a saving in the quantity of sugar, necessary to render them agreeable to the palate; for the blanched leaf stalks are much less harsh than those grown under the full influence of light in an open situation.

This plant may be forced by placing flower barrels or tight boxes over a few plants and covering them over with fresh stable manure or by some of the other methods in Gardening, directed for forcing vegetables. By covering over all the roots to the depth of a few inches with leaves or light litter or any other protection from cold, the Rhubarb leaves will come forward much earlier in the spring much larger. The protection should be removed as soon as the weather becomes warm, carefully avoiding to injure the young shoots that may have started.

Whenever you would gather the petioles remove the earth a little from the crown of the root, and somewhat bending down the leaf, which you would remove, then slip it off with your hand, without using a knife or breaking the stalk. The leaf stalks may be gathered as soon as they are half grown or are sufficiently expanded; but a much larger produce can be obtained by letting them remain until full expansion has taken place, when the full grown stalks are gathered and tied up in bundles of about a dozen each, and thus exposed for sale in the market. Some of the leaf stalks are two or three long and over.

As letting the stalks run up to flower would weaken the powers of the roots for preparing the necessary nourishment for winter quarters,—top all but a few of the healthiest ones, which may be left to perfect their seeds, which will ripen in August or the last of July.

The Petioles or leaf stalks of the Rhubarb plant are used in cooking pies, tarts, preserves, sauce, puddings, &c.

1. *Rhubarb Preserve*; strip the stalks of their outer skin and divest them of the small fibres which would render them stringy,—more especially if the leaves are a little old,—then cut them transversely into short pieces about the size of Gooseberries and parboil them with as much sugar and such spices suit the taste.

2. *Rhubarb Pudding*; with a rolling pin, as if for an apple dumpling, flatten out a suety crust and spread thereon the stalks cut into small pieces of a gooseberry size, then roll them up in any shape at fancy and boil in cloths, same as apple dumplings; it is served up hot, cut in thin slices with sugar and butter sauce between each layer; in this way the fruit retains all its virtues and by most persons is highly relished.

3. *Rhubarb Pie*; cut the stalks to pieces of the size of the Gooseberry, put these pieces into a dish with its bottom covered with a crust or not at pleasure; squeeze over them a little lemon juice, adding orange peel, sugar, rose-water, cinnamon and other spices to your taste, covering the whole with a good puff paste, and then bake it.

4. *Rhubarb Tarts resembling Codling Tarts*; cut the leaf stalks into pieces about four inches long, skin and slowly simmer them in a sauce pan with sugar and a trifle of water, for one hour; when cold, make them taste like cordons by adding cinnamon, lemon, peel, &c.

5. *Rhubarb Sauce*; boil the stalks over a slow fire, till tender, in a small quantity of water with sugar and such spices as suit the taste, and strain off the liquor, squeezing the stalks dry, and, when the liquid syrup or sauce is cold, bottle and cork it tight; this will keep for years.

After giving the above recipes, we are sure that our esteemed friend correspondent will excuse us from publishing the recipes for making Rubarb—cream—jelly—jam—trifle—fool—marmalade, &c. &c. as they can easily be made from the cookery books, by substituting "Rhubarb" for "Gooseberries," "Strawberries," &c. used in the common way of making those sweetmeats.

LIEBIG'S CHEMISTRY FOR AGRICULTURE. Mr. Owen of Cambridge, Mass. has published a large duodecimo volume entitled "Liebig's Organic Chemistry of Agriculture and Physiology, with an Introduction, Notes, and Appendix, by J. W. Webster, M. D., Professor of Chemistry in Harvard University."

We have not yet obtained a copy of this work, but it is spoken of in the highest terms at the east. The Philadelphia U. S. Gazette says:

"On looking over this volume we were struck with what we thought a admirable adaptation to practical agriculture; and we were about to invite to the work the attention of those who feel and have an interest in the promotion of that truly independent trade, the business of cultivating the earth. This we should have done with that kind of a caveat which would be becoming one who professes little knowledge of the science of chemistry generally, and can boast, perhaps, of little more of the business of tilling the earth. But we find that profound chemists have pronounced most favorably upon Liebig's work, and professed agriculturists have tested its excellence. And though we cannot find space for all that we see written of the excellence of the work, yet we cannot deny some space to a republication of opinions that may commend the volume to those whose pursuits will make it most valuable to them:

"It is the best book," writes Mr. Nuttall, "ever published on Vegetable Chemistry as applied to Agriculture, and calculated undoubtedly to produce a new era in the science."

Extract from a letter from Dr. Colman, Commissioner for the Agricultural Survey of Massachusetts, dated February 15th, 1841:

"It is the most valuable contribution to Agricultural science, which has come within my knowledge. It takes new views on many subjects, which have been long discussed without any progress towards determinate conclusions; and reveals principles which are of the highest importance. Some of these principles require further elucidation and proof; but, in general, they are so well established by facts within my own observation, that, in my opinion, the truth, if not already reached, is not far distant."

From Silliman's Journal, January, 1841: "It is not too much to say, that the publication of Professor Liebig's Organic Chemistry of Agriculture, constitutes an era of great importance in the history of Agricultural science. Its acceptance as a standard is unavoidable, for, following closely in the straight path of inductive philosophy, the conclusions which are drawn from its data are incontrovertible." "To some, the style of this work may seem somewhat obscure; but it will be found, on a perusal, that great condensation, brevity and terseness, have been mistaken for obscurity." "We can truly say, that we have never risen from the perusal of a book with a more thorough conviction of the profound knowledge, extensive reading, and practical research of its author, and of the invincible power and importance of its reasonings and conclusions, than we have gained from the present volume."

From the London Farmer's Magazine. ON PREPARING NIGHT SOIL.

Sir—I observed a few days ago in one of your late periodicals, an inquiry, by a correspondent, for the best method of preparing night soil for manure. He said he had mixed it with lime, and a very strong smell of ammonia was evolved, whereby he feared the efficacy of the manure might be impaired. These conclusions are perfectly correct; its efficacy as organic manure would be destroyed by the use of lime.

When an organic body containing nitrogen undergoes putrefaction, and moisture present, the nitrogen unites with the hydrogen of the water and forms ammonia; the oxygen, the other element of water, unites with the carbon of the putrifying body, and forms carbonic acid; both of these transformations, in their nascent state, combine and form carbonate of ammonia, a volatile salt, which is always evaporating with water, as long as the decomposition continues. Such invariably takes place in nitrogenous bodies.

When lime is added to a body holding carbonate of ammonia in solution, as in night soil, the ammoniacal salt is decomposed; the lime robs it of its carbonic acid, and caustic ammonia, a still more volatile compound, flies off in gas; thus we have got rid of all the nitrogen the organic compound contained.

Organic manure, without nitrogen, is of very little value. It pervades every part

of the vegetable structure, and no plant will attain maturity, even in the richest mould, without its presence. The relative value of manure may be known by the relative quantity of nitrogen it contains. There does not appear to be any manure so rich in nitrogen as human excrement (except bone manure, which contains upwards of 30 per cent. of gelatine in its interstices); so much so, that according to the analyses of Macaire and Marcet 100 parts of human urine are equal to 1300 parts of fresh dung of the horse, 600 parts of the cow, and 450 parts of the urine of the horse. Hence it is evident that it would be of much importance if none of the human excrements were lost, especially when we consider that with every pound of urine a pound of wheat might be produced. Now I would suggest to your correspondent the best and most economical method I know of preserving unimpaired the most valuable element in night soil, which is as follows: To every 100 lbs. of night soil add 7 lbs. of sulphate of lime (gypsum) in powder, a double decomposition will ensue, and the result will be, instead of sulphate of lime and carbonate of ammonia, carbonate of lime and sulphate of ammonia; the latter a soluble salt which cannot be volatilized. It might now be mixed with other compost, or dried any way thought proper, and applied to the roots of the vegetable, to be again transformed into bread, butter, cheese, &c.

Chloride of calcium, sulphuric or muriatic acid, substances of low price, would completely neutralize the urine, converting its ammonia into salts which possess no volatility.

I would also suggest that if the floors of stables be strewn from time to time with a little sulphate of lime, they will lose all their offensive smell, and none of the ammonia which forms can be lost, but retained in a condition serviceable as manure. In close stables the horses' health would be better preserved, and they would not be so liable to get blind as now. 13-4 lbs. of sulphate of lime will fix as much ammonia as is produced by 100 lbs. of horse's urine.

I am sir, your obedient servant, GREGORY BRABYN.

SMALL BIRDS.

In a Report made to the Legislature of Massachusetts, at the Session before the last by the Rev. Mr. Peabody, which has just fallen into our hands, he remarks, that "to exterminate birds which do a little harm occasionally, is to protect ourselves from a small evil at the expense of a greater, and in fact securing the fruit at the expense of the tree. Means may be devised to prevent the ravages of birds, but none have yet been discovered to prevent the ravages of insects. The birds guard our fields, and gardens from the insect; and if they, now and then, taste of the fruit which they have preserved, we can better afford a share to them, than the whole to their creeping enemy. To give some idea of the service which birds are able to render. Mr. Peabody notices the computation of Wilson, according to which, a red winged blackbird devours on an average fifty grubs a day—a pair of them, in four months, will consume twelve thousand—and allowing a million pair of blackbirds to New England, (which is but a moderate estimate) they will destroy twelve thousand millions of the grub. He also notices the statement of Kalm that after some states had paid three pence a dozen for the destruction of blackbirds, the consequence was a total loss in the year 1749, of all the grass and grain, by means of insects which had flourished under the protection of the law allowing bounties on birds."

CAPITAL.

There is no mistake more common nor more injurious, than that of supposing that the more land a man holds, the greater must be his profits, for the profit does not arise from the land itself, but from the manner of using; for the best soil may be made unproductive by bad management while the worst may be rendered profitable by the opposite course; without sufficient capital no land can be properly cultivated; at the same time there is nothing to which capital can be applied with greater certainty of a fair return for liberal expenditure, than in correctly employed, than land. In fact, assuming always that the expenditure be directed with judgement, it will be found that the profit upon the outlay increases in more than a proportionate degree to its amount; thus, supposing twenty-five dollars be the lowest, and fifty the highest sum that can be employed in the common culture of the same acre of land, it is more than profitable that if twenty-five return at the rate of ten per cent., the fifty dollars will yield twenty, or an intermediate sum, at the same progressive ratio. And admitting this to be true—and it is presumed no experienced agriculturist will doubt it—it follows, that a capital of 5,000 dollars, expended in the cultivation of 200 acres, will only yield a profit of 500 dollars, while, if applied to no more than 100 acres, it would produce 1,000 dollars; therefore, it is evident that his profit would be increased by diminishing the quantity of his land. Many a man has been ruined by a large farm, who might have acquired a competency with one of half the size. Most farmers are anxious for

large occupations, and many are thus betrayed into the error of taking a greater quantity of ground than they have the means for managing to advantage; some in the delusive hope of acquiring these means by future savings; others, from the vanity of holding more land than their neighbors: hence arises deficiencies of stock, imperfect tillage, and scanty crops, with all the consequent train of rent in arrear, wages ill-paid, and debts unsatisfied—distress, duns, and final ruin! While he, who prudently commences with only such a number of acres as he has the power of cultivating with proper effect, is certain of obtaining the full return from the soil, and not being burdened with more land than he can profitably enjoy, his engagements are within his means; and thus, while enjoying present ease of mind, he lays the surest foundation for future prosperity. It therefore behooves a man to weigh well the charges with his means, and never allow himself to be seduced by any ideal prospect of gain, into the imprudence of entering upon a larger farm than his property will enable him to manage with the spirit necessary to insure success. British Husbandry.

From the American Farmer.

THE RHODAN POTATO.

Of the productive nature of this new variety of this excellent root, there is no difference of opinion; for every one who has given it a fair trial admit its great superiority in this respect. But there are those who decry its claims as a vegetable for table use. By some it has been denounced as a coarse watery thing, fit only for the food of stock. To such opinion I dissent in toto; and I do so from an experience of two years. During the last winter and present spring I have had no other potato upon my table, and I affirm that for flavor and mealiness, it stands only second in my estimation to all other varieties that I have ever eaten of. It was but yesterday I partook of it, and instead of being coarse and watery, it was dry, mealy, and of excellent flavor. Indeed as a potato for spring use I think it equal to any other; not even making an exception in favor of the justly celebrated Mercer. Without any covering, my Rhodans have kept well in my cellar from last fall until now, and they are just as sound as they were when they were taken up.

In strong sandy loam, well manured and tended, I am justified from actual trial in saying, that they will yield from 500 to 700 bushels per acre. Such being the case, are they not entitled to the consideration of every agriculturist who farms for profit? I leave the solution of this question to others, and will conclude by observing that I have no sinister motive to subserve by this notice, as I have not, nor never expect to have one for sale.

AGRICULTOR.

ON THE CULTURE OF WHEAT.

There is good reason to believe that the export from Lake Erie of this great Western staple will not fall below ten million of bushels during the present season.—Any improvement in the production of an article of such immense importance to the commerce of Buffalo and to all classes who desire an abundance of good cheap bread, cannot fail to interest our readers. Hence no apology is necessary for devoting considerable space in our columns to detailing the practical results of careful experiments made in Great Britain with a view to cheapen the expense of culture, and augment both the quantity and quality of wheat grown on an acre in the highest degree.

Colonel LE COUTEUR, of the Island of Jersey, has recently made some important discoveries in the propagation of wheat plants their adaptation to peculiar soil both natural and artificial, and in the whole process, of obtaining the greatest amount of the best flour at the least expense of land and labor. From some strange oversight, his valuable work upon "wheat," and his "Essay on pure and improved Varieties of Wheat lately introduced into England," which received a prize of twenty sovereigns, have not been republished in this country. And we are indebted to Mr. LE CRAS, lately a resident of the island of Jersey, for the perusal of these works, and the privilege of making an abstract of such portions as we deem of most service to the wheat-growers of the United States.

Mr. LE COUTEUR has succeeded in producing, by crossing the different kinds of wheat formerly cultivated, over 150 varieties and sub-varieties of this grain. He commenced his experiments some six years ago by selecting a few of the best heads of wheats from fourteen of the most esteemed varieties cultivated in England. The kernels in these heads were all carefully counted and planted in separate parcels, and treated alike in every respect as to soil and culture. The result demonstrated an astonishing difference both in the productiveness and quality of these several varieties of wheat. No kernels were counted except such as grew, and the experiment was most satisfactorily conducted in every respect. Sixty-one grains of white Dantzic gave 3 lbs. 3 oz. of wheat, and 3 lbs. 9 oz. of straw; whereas 59 grains of what had been regarded as a choice variety of red wheat gave only

1 lb. 10 oz. of wheat, and 2 lbs. 5 oz. of straw. No. 8, a downy variety of white wheat, gave 4 lbs. 4 oz. of wheat, and 13 lbs. 3 oz. of straw, from 55 grains. The experienced wheat-grower in this country would be rejoiced to cultivate a variety of wheat which would yield him a good crop of straw bearing an amount of grain one-third larger in weight than the straw itself. And yet this was obtained at the first experiment, as stated above.

The author selected five or six varieties of these fourteen several parcels and cultivated some of them at great pains in their pure state, while he commenced a judicious system of crossing with others, for the purpose of producing new varieties superior to any of them. In this he was quite successful. To prevent mistake and undesirable mixing of different varieties of wheat when in blossom, one pistil on a head was preserved, while all the pollen was carefully removed. This pistil was fructified by the selected pollen, and only one kernel was produced, which, when planted, sometimes yielded 1,000 kernels of the new variety. By pursuing this course for a series of years, and cultivating his seed wheat by itself, and propagating from those kinds only which produced the most and best flour with the least bran, Colonel Le Couteur now obtains over twenty-four hundred pounds of superfine flour to the acre, and his wheat is so very thin skinned that 52 bushels grown upon an acre, give only 542 pounds of bran, middlings and shorts. A hundred pounds of the flour of his improved wheat will make, as repeated and most careful experiments have demonstrated, from 6 to 12 per cent. more good bread than the same quantity of the best common flour in the market.

It is estimated that there are five millions of acres sown to wheat annually in Great Britain; and it is considered quite practicable to increase the product without any additional expense, eight bushels an acre, or forty millions in the aggregate. This would more than supply the home consumption, and enable the British nation to export many millions of bushels of wheat. It is then that the great problem important to the great American staple should be understood, the best method of its cultivation, to complete successfully with the science and skill of English husbandry. The struggle hereafter between civilized nations in agriculture, manufactures, and war even, will depend less upon superiority in mere physical force, than the combinations and deductions of practical science. The steam power of Great Britain performs an amount of labor, which, if executed by human hands, would employ all the able bodied men in the world. The vegetable, mineral, and reform ingredients which combine in nature and can be brought into contact by art, for the production of the most valuable wheat, ought to be studied and thoroughly understood by every cultivator of the soil.—*Buffalo Commercial Advertiser.*

AMERICAN SOCIETY OF AGRICULTURE.

An address to the farmers of the United States; to every friend of agricultural improvement; to every citizen of the United States who desires to see elevated the character and standing of the cultivators of American soil.

Most respected and most respectable friends and brothers, give me your attention for a few fleeting moments; your humble brother, who now addresses you, published a suggestion about three years ago, for the purpose of arousing your attention to the subject of forming a National Agricultural Society; that suggestion was then responded to with a hearty good will throughout the country. But action upon the subject has been overwhelmed by the political whirlwind that has swept over our country, in the first lull of the succeeding calm, the proposition to form such a society has been renewed, and with one exception, has met with a cheering "God speed the project." None doubt the utility of the proposed society, yet doubtless there are many who would like to see the objects, end and aim of the society more fully explained. To such I now offer some of my views, and in doing so, invite you all to give yours; for this is one of the objects of a National Society to interchange our views.

Many warm friends of the measure, who are anxious to see the society in operation, cannot see how it is to be organized. They say, "No doubt if once organized, it would daily increase in strength and usefulness; but it is like a great complicated piece of machinery, of great use and value when once in motion, but difficult to start." Now, to me there is no difficulty in their way. All that is wanted is a few active engineers to put the machine in motion. Immediate and decided action of a few of the active friends of agricultural improvement, who must assume the responsibility to act as engineers as well as pioneers for the whole Union; and having once given the society an existence, it will flourish and increase in strength just as our political Union has done.

The following plan of organizing the society is suggested to your consideration. Let as many of the friends of the project as can be induced to do so, meet at the City of Washington, on some day of the autumn of 1841, (the particular day to be hereafter fixed), and there form a constitution for the society, and elect officers, to wit: a President, a Vice President for each state, a recording Secretary, a general corresponding Secretary, and a corresponding Secretary for each State, county, city and principal town in the United States, and probably a publisher of a national paper, to be called the Journal of the American Society of Agriculture.